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<110> FUKATSU, Kohji
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SUZUKI, Nobuhiro
HARADA, Masataka
YASUMA, Tsuneo

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			210		215										
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			225		230										240
Asn	Ala	Ser	Asn	Val	Ala	Ser	Phe	Leu	Tyr	Pro	Asn	Leu	Gly	Gly	Ser
			245		250										255
Trp	Arg	Lys	Leu	Gly	Leu	Ile	Thr	Gly	Ala	Trp	Ser	Val	Val	Leu	Asn
			260		265										
Pro	Leu	Val	Thr	Gly	Tyr	Leu	Gly	Arg	Gly	Pro	Gly	Leu	Lys	Thr	Val
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Cys	Ala	Ala	Arg	Thr	Gln	Gly	Gly	Lys	Ser	Gln	Lys				
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 35 40 45
 Gly Cys Ser Asp Leu Leu Leu Thr Val Ser Leu Pro Leu Lys Ala Val
 50 55 60
 Glu Ala Leu Ala Ser Gly Ala Trp Pro Leu Pro Ala Ser Leu Cys Pro
 65 70 75 80
 Val Phe Gly Val Ala His Phe Ala Pro Leu Tyr Ala Gly Gly Gly Phe
 85 90 95
 Leu Ala Ala Leu Ser Ala Gly Arg Tyr Leu Gly Ala Ala Phe Pro Leu
 100 105 110
 Gly Tyr Gln Ala Phe Arg Arg Pro Cys Tyr Ser Trp Gly Val Cys Ala
 115 120 125
 Ala Ile Trp Ala Leu Val Leu Cys His Leu Gly Leu Val Phe Val Leu
 130 135 140
 Glu Ala Pro Gly Gly Trp Leu Asp His Ser Asn Thr Ser Leu Gly Ile
 145 150 155 160
 Asn Thr Pro Val Asn Gly Ser Pro Val Cys Leu Glu Ala Trp Asp Pro
 165 170 175
 Ala Ser Ala Gly Pro Ala Arg Phe Ser Leu Ser Leu Leu Leu Phe Phe
 180 185 190
 Leu Pro Leu Ala Ile Thr Ala Phe Cys Tyr Val Gly Cys Leu Arg Ala
 195 200 205
 Leu Ala His Ser Gly Leu Thr His Arg Arg Lys Leu Arg Ala Ala Trp
 210 215 220
 Val Ala Gly Gly Ala Leu Leu Thr Leu Leu Leu Cys Val Gly Pro Tyr
 225 230 235 240
 Asn Ala Ser Asn Val Ala Ser Phe Leu Asn Pro Asn Leu Gly Gly Ser
 245 250 255
 Trp Arg Lys Leu Gly Leu Ile Thr Gly Ala Trp Ser Val Val Leu Asn
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Arg Ala Arg Leu Arg Leu Thr Pro Asn Leu Val Tyr Thr Leu His Leu
      35              40              45
Ala Cys Ser Asp Leu Leu Leu Ala Ile Thr Leu Pro Val Lys Ala Val
      50              55              60
Glu Ala Leu Ala Ser Gly Ala Trp Pro Leu Pro Leu Pro Leu Cys Pro
      65              70              75              80
Val Phe Val Leu Val His Phe Ala Pro Leu Tyr Ala Gly Gly Gly Phe
      85              90              95
Leu Ala Ala Leu Ser Ala Gly Arg Tyr Leu Gly Ala Ala Phe Pro Phe
      100             105             110
Gly Tyr Gln Ala Val Arg Arg Pro Arg Tyr Ser Trp Gly Val Cys Val
      115             120             125
Ala Ile Trp Ala Leu Val Leu Cys His Met Gly Leu Val Leu Gly Leu
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Glu Ala Pro Gly Gly Trp Leu Asn Thr Thr Ser Ser Ser Leu Gly Ile
      145             150             155             160
Asn Thr Pro Val Asn Gly Ser Pro Val Cys Leu Glu Ala Trp Asp Pro
      165             170             175
Asn Ser Ala Arg Pro Ala Arg Leu Ser Phe Ser Ile Leu Leu Phe Phe
      180             185             190
Val Pro Leu Val Ile Thr Ala Phe Cys Tyr Val Gly Cys Leu Arg Ala
      195             200             205
Leu Ala His Ser Gly Leu Ser His Lys Arg Lys Leu Arg Ala Ala Trp
      210             215             220
Ala Ala Gly Gly Ala Phe Leu Thr Leu Leu Cys Leu Gly Pro Tyr
      225             230             235             240
Asn Ala Ser Asn Val Ala Ser Phe Val Asn Pro Asp Leu Gly Gly Ser
      245             250             255
Trp Arg Lys Leu Gly Leu Ile Thr Gly Ser Trp Ser Val Val Leu Asn
      260             265             270
Pro Leu Val Thr Gly Tyr Leu Gly Ala Ser Pro Gly Arg Gly Thr Val
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Cys Thr Thr Arg Thr Gln Gly Gly Thr Ile Gln Lys
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<400> 12
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<400> 21

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<212> RNA

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<223> n stands for deoxy ribothymidine

<400> 23

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3119

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<151> 2002-11-08
<150> JP 2003-16889
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35 40 45
Gly Cys Ser Asp Leu Leu Leu Ala Ile Thr Leu Pro Leu Lys Ala Val
50 55 60
Glu Ala Leu Ala Ser Gly Ala Trp Pro Leu Pro Leu Pro Phe Cys Pro
65 70 75 80
Val Phe Ala Leu Ala His Phe Ala Pro Leu Tyr Ala Gly Gly Gly Phe
85 90 95
Leu Ala Ala Leu Ser Ala Gly Arg Tyr Leu Gly Ala Ala Phe Pro Phe
100 105 110
Gly Tyr Gln Ala Ile Arg Arg Pro Arg Tyr Ser Trp Gly Val Cys Val
115 120 125
Ala Ile Trp Ala Leu Val Leu Cys His Leu Gly Leu Ala Leu Gly Leu
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Glu Thr Ser Gly Ser Trp Leu Asp Asn Ser Thr Ser Ser Leu Gly Ile
145 150 155 160
Asn Ile Pro Val Asn Gly Ser Pro Val Cys Leu Glu Ala Trp Asp Pro
165 170 175
Asp Ser Ala Arg Pro Ala Arg Leu Ser Phe Ser Ile Leu Leu Phe Phe
180 185 190
Leu Pro Leu Val Ile Thr Ala Phe Cys Tyr Val Gly Cys Leu Arg Ala
195 200 205
Leu Val Arg Ser Gly Leu Ser His Lys Arg Lys Leu Arg Ala Ala Trp
210 215 220
Val Ala Gly Gly Ala Leu Leu Thr Leu Leu Leu Cys Leu Gly Pro Tyr
225 230 235 240
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245 250 255
Trp Arg Lys Leu Gly Leu Ile Thr Gly Ala Trp Ser Val Val Leu Asn
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Cys Val Thr Arg Thr Gln Arg Gly Thr Ile Gln Lys
290 295 300

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      20          25          30
His Ala Lys Leu Arg Leu Thr Pro Ser Leu Val Tyr Thr Leu His Leu
      35          40          45
Ala Cys Ser Asp Leu Leu Leu Ala Ile Thr Leu Pro Leu Lys Ala Val
      50          55          60
Glu Ala Leu Ala Ser Gly Val Trp Pro Leu Pro Leu Pro Phe Cys Pro
      65          70          75          80
Val Phe Ala Leu Ala His Phe Ala Pro Leu Tyr Ala Gly Gly Gly Phe
      85          90          95
Leu Ala Ala Leu Ser Ala Gly Arg Tyr Leu Gly Ala Ala Phe Pro Phe
      100         105         110
Gly Tyr Gln Ala Ile Arg Arg Pro Cys Tyr Ser Trp Gly Val Cys Val
      115         120         125
Ala Ile Trp Ala Leu Val Leu Cys His Leu Gly Leu Ala Leu Gly Leu
      130         135         140
Glu Ala Pro Arg Gly Trp Val Asp Asn Thr Thr Ser Ser Leu Gly Ile
      145         150         155         160
Asn Ile Pro Val Asn Gly Ser Pro Val Cys Leu Glu Ala Trp Asp Pro
      165         170         175
Asp Ser Ala Arg Pro Ala Arg Leu Ser Phe Ser Ile Leu Leu Phe Phe
      180         185         190
Leu Pro Leu Val Ile Thr Ala Phe Cys Tyr Val Gly Cys Leu Arg Ala
      195         200         205
Leu Val His Ser Gly Leu Ser His Lys Arg Lys Leu Arg Ala Ala Trp
      210         215         220
Val Ala Gly Gly Ala Leu Leu Thr Leu Leu Leu Cys Leu Gly Pro Tyr
      225         230         235         240
Asn Ala Ser Asn Val Ala Ser Phe Ile Asn Pro Asp Leu Glu Gly Ser
      245         250         255
Trp Arg Lys Leu Gly Leu Ile Thr Gly Ala Trp Ser Val Val Leu Asn
      260         265         270
Pro Leu Val Thr Gly Tyr Leu Gly Thr Gly Pro Gly Gln Gly Thr Ile
      275         280         285
Cys Val Thr Arg Thr Pro Arg Gly Thr Ile Gln Lys
      290         295         300

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<210> 4
 <211> 900
 <212> DNA
 <213> Rat
 <400> 4

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aatgcttcca atgtggctag ttccataaac ccggacttag aaggctcctg gaggaagttg 780
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<210> 5
 <211> 300
 <212> PRT
 <213> Human
 <400> 5

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Met Asp Leu Pro Pro Gln Leu Ser Phe Gly Leu Tyr Val Ala Ala Phe
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Ala Leu Gly Phe Pro Leu Asn Val Leu Ala Ile Arg Gly Ala Thr Ala
      20          25          30
His Ala Arg Leu Arg Leu Thr Pro Ser Leu Val Tyr Ala Leu Asn Leu
      35          40          45
Gly Cys Ser Asp Leu Leu Leu Thr Val Ser Leu Pro Leu Lys Ala Val

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50 55 60
 Glu Ala Leu Ala Ser Gly Ala Trp Pro Leu Pro Ala Ser Leu Cys Pro
 65 70 75 80
 Val Phe Ala Val Ala His Phe Phe Pro Leu Tyr Ala Gly Gly Gly Phe
 85 90 95
 Leu Ala Ala Leu Ser Ala Gly Arg Tyr Leu Gly Ala Ala Phe Pro Leu
 100 105 110
 Gly Tyr Gln Ala Phe Arg Arg Pro Cys Tyr Ser Trp Gly Val Cys Ala
 115 120 125
 Ala Ile Trp Ala Leu Val Leu Cys His Leu Gly Leu Val Phe Gly Leu
 130 135 140
 Glu Ala Pro Gly Gly Trp Leu Asp His Ser Asn Thr Ser Leu Gly Ile
 145 150 155 160
 Asn Thr Pro Val Asn Gly Ser Pro Val Cys Leu Glu Ala Trp Asp Pro
 165 170 175
 Ala Ser Ala Gly Pro Ala Arg Phe Ser Leu Ser Leu Leu Leu Phe Phe
 180 185 190
 Leu Pro Leu Ala Ile Thr Ala Phe Cys Tyr Val Gly Cys Leu Arg Ala
 195 200 205
 Leu Ala Arg Ser Gly Leu Thr His Arg Arg Lys Leu Arg Ala Ala Trp
 210 215 220
 Val Ala Gly Gly Ala Leu Thr Leu Leu Leu Cys Val Gly Pro Tyr
 225 230 235 240
 Asn Ala Ser Asn Val Ala Ser Phe Leu Tyr Pro Asn Leu Gly Gly Ser
 245 250 255
 Trp Arg Lys Leu Gly Leu Ile Thr Gly Ala Trp Ser Val Val Leu Asn
 260 265 270
 Pro Leu Val Thr Gly Tyr Leu Gly Arg Gly Pro Gly Leu Lys Thr Val
 275 280 285
 Cys Ala Ala Arg Thr Gln Gly Gly Lys Ser Gln Lys
 290 295 300

<210> 6

<211> 900

<212> DNA

<213> Human

<400> 6

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 agcctggtct agccctgaa cctgggctgc tccgacctgc tgcctgacgt ctctctgccc 180
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 aacacaccgg tcaacggctc tccggtctgc ctggaggcct gggaccgggc ctctgccggc 540
 ccggcccgtc tcagcctctc tctcctgtgc tttttctgc ccttggccat cacagccttc 600
 tgcctagtgg gctgcctccg ggcactggcc cgtccgggcc tgacgcacag gcggaagctg 660
 cgggcccgtc ggggtggccg cggggccctc ctacagctgc tgcctgtcgt aggaccctac 720
 aacgcctcca acgtggccag ctctctgtac cccaatctag gaggctcctg gcggaagctg 780
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<210> 7

<211> 300

<212> PRT

<213> Monkey

<400> 7

Met Asp Leu Pro Pro Gln Leu Ser Phe Ala Leu Tyr Val Ala Ala Phe
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 Ala Leu Gly Phe Pro Leu Asn Val Leu Ala Ile Arg Gly Ala Arg Ala
 20 25 30
 His Ala Arg Arg Arg Leu Thr Pro Ser Leu Val Tyr Ala Leu Asn Leu
 35 40 45
 Gly Cys Ser Asp Leu Leu Leu Thr Val Ser Leu Pro Leu Lys Ala Val
 50 55 60
 Glu Ala Leu Ala Ser Gly Ala Trp Pro Leu Pro Ala Ser Leu Cys Pro
 65 70 75 80
 Val Phe Gly Val Ala His Phe Ala Pro Leu Tyr Ala Gly Gly Gly Phe
 85 90 95
 Leu Ala Ala Leu Ser Ala Gly Arg Tyr Leu Gly Ala Ala Phe Pro Leu
 100 105 110
 Gly Tyr Gln Ala Phe Arg Arg Pro Cys Tyr Ser Trp Gly Val Cys Ala
 115 120 125
 Ala Ile Trp Ala Leu Val Leu Cys His Leu Gly Leu Val Phe Val Leu
 130 135 140
 Glu Ala Pro Gly Gly Trp Leu Asp His Ser Asn Thr Ser Leu Gly Ile

145 150 155 160
 Asn Thr Pro Val Asn Gly Ser Pro Val Cys Leu Glu Ala Trp Asp Pro
 165 170 175
 Ala Ser Ala Gly Pro Ala Arg Phe Ser Leu Ser Leu Leu Leu Phe Phe
 180 185 190
 Leu Pro Leu Ala Ile Thr Ala Phe Cys Tyr Val Gly Cys Leu Arg Ala
 195 200 205
 Leu Ala His Ser Gly Leu Thr His Arg Arg Lys Leu Arg Ala Ala Trp
 210 215 220
 Val Ala Gly Gly Ala Leu Leu Thr Leu Leu Leu Cys Val Gly Pro Tyr
 225 230 235 240
 Asn Ala Ser Asn Val Ala Ser Phe Leu Asn Pro Asn Leu Gly Gly Ser
 245 250 255
 Trp Arg Lys Leu Gly Leu Ile Thr Gly Ala Trp Ser Val Val Leu Asn
 260 265 270
 Pro Leu Val Thr Gly Tyr Leu Gly Arg Gly Pro Gly Leu Lys Thr Val
 275 280 285
 Cys Ala Ala Arg Thr Gln Gly Ser Thr Ser Gln Lys
 290 295 300
 <210> 8
 <211> 900
 <212> DNA
 <213> Monkey
 <400> 8
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 agcctgggtct acgcccgtgaa cctgggctgc tccgacctgt tgctgacagt ctccctgccc 180
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 aacacaccgg tcaacggctc tcccgtctgc ctggaggcct gggaccggcg ctctgccggc 540
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 aacgcctcca atgtggccag ctttctgaac cccaatctgg gaggctcctg gcggaagctg 780
 gggctcatca cgggtgcctg gagtgtgtg ctcaaccgcg tggtgaccgg ttacttggga 840
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 <210> 9
 <211> 300
 <212> PRT
 <213> Hamstar
 <400> 9
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 Ala Leu Gly Phe Pro Leu Asn Leu Leu Ala Ile Arg Gly Ala Val Ala
 20 25 30
 Arg Ala Arg Leu Arg Leu Thr Pro Asn Leu Val Tyr Thr Leu His Leu
 35 40 45
 Ala Cys Ser Asp Leu Leu Leu Ala Ile Thr Leu Pro Val Lys Ala Val
 50 55 60
 Glu Ala Leu Ala Ser Gly Ala Trp Pro Leu Pro Leu Pro Leu Cys Pro
 65 70 75 80
 Val Phe Val Leu Val His Phe Ala Pro Leu Tyr Ala Gly Gly Gly Phe
 85 90 95
 Leu Ala Ala Leu Ser Ala Gly Arg Tyr Leu Gly Ala Ala Phe Pro Phe
 100 105 110
 Gly Tyr Gln Ala Val Arg Arg Pro Arg Tyr Ser Trp Gly Val Cys Val
 115 120 125
 Ala Ile Trp Ala Leu Val Leu Cys His Met Gly Leu Val Leu Gly Leu
 130 135 140
 Glu Ala Pro Gly Gly Trp Leu Asn Thr Thr Ser Ser Ser Leu Gly Ile
 145 150 155 160
 Asn Thr Pro Val Asn Gly Ser Pro Val Cys Leu Glu Ala Trp Asp Pro
 165 170 175
 Asn Ser Ala Arg Pro Ala Arg Leu Ser Phe Ser Ile Leu Leu Phe Phe
 180 185 190
 Val Pro Leu Val Ile Thr Ala Phe Cys Tyr Val Gly Cys Leu Arg Ala
 195 200 205
 Leu Ala His Ser Gly Leu Ser His Lys Arg Lys Leu Arg Ala Ala Trp
 210 215 220
 Ala Ala Gly Gly Ala Phe Leu Thr Leu Leu Leu Cys Leu Gly Pro Tyr
 225 230 235 240
 Asn Ala Ser Asn Val Ala Ser Phe Val Asn Pro Asp Leu Gly Gly Ser

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	245	250	255
Trp Arg Lys Leu Gly Leu Ile Thr Gly Ser Trp Ser Val Val Leu Asn			
	260	265	270
Pro Leu Val Thr Gly Tyr Leu Gly Ala Ser Pro Gly Arg Gly Thr Val			
	275	280	285
Cys Thr Thr Arg Thr Gln Gly Gly Thr Ile Gln Lys			
	290	295	300

<210> 10
 <211> 900
 <212> DNA
 <213> Hamstar
 <400> 10

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aatgcctcca atgtggcag ttctgtaaac ccggacctgg gaggctcctg gaggaagctg	780
gggctcatca cagggtcctg gagtgtgta ctcaaccgcg tggtcaccgg ttacttggga	840
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<210> 11
 <211> 33
 <212> DNA
 <213> Artificial Sequence
 <220>

<400> 11
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<210> 12
 <211> 33
 <212> DNA
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<400> 12
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<210> 13
 <211> 41
 <212> DNA
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 <220>

<223> Designed oligonucleotide primer to amplify DNA encoding mGRP40
 <400> 13
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<210> 14
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 <212> DNA
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<223> Designed oligonucleotide primer to amplify DNA encoding mGRP40
 <400> 14
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<210> 15
 <211> 41
 <212> DNA
 <213> Artificial Sequence
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<223> Designed oligonucleotide primer to amplify DNA encoding rGRP40
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<210> 16
 <211> 38
 <212> DNA
 <213> Artificial Sequence
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<223> Designed oligonucleotide primer to amplify DNA encoding rGRP40
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<210> 17
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<212> DNA
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 <210> 18
 <211> 23
 <212> DNA
 <213> Artificial Sequence
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 <223> Designed oligonucleotide primer to amplify DNA encoding monkeyGRP40
 <400> 18
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 <210> 19
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 <213> Artificial Sequence
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 <223> Designed oligonucleotide primer to amplify DNA encoding monkeyGRP40
 <400> 19
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 <210> 21
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 <400> 21
 gtcgacgacg agaggcacc actcggcccc atg 33
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 <400> 22
 gctagcctac ttctgaattg ttctccttg agt 33
 <210> 23
 <211> 21
 <212> RNA
 <213> Artificial Sequence
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 <223> n stands for deoxy ribothymidine
 <400> 23
 cgccaguugu gacauucuun n 21
 <210> 24
 <211> 21
 <212> RNA
 <213> Artificial Sequence
 <220>
 <223> n stands for deoxy ribothymidine
 <400> 24
 nngcggucaa cacuguaaga a 21
 <210> 25
 <211> 21
 <212> RNA
 <213> Artificial Sequence
 <220>
 <223> n stands for deoxy ribothymidine
 <400> 25
 cuuguuagcc auccgaggcn n 21
 <210> 26
 <211> 21
 <212> RNA
 <213> Artificial Sequence
 <220>
 <223> n stands for deoxy ribothymidine
 <400> 26

nngaacaatc ggtaggctcc g

21

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